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MCA 3rd Semester Examination

Software Engineering

MCA-305

Time : 3 Hours   **Max. Marks : 60**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note :   There are five sections in all namely A, B, C & D. Section E is compulsory. Rest attempt one question each from the sections A, B, C & D.

SECTION - A

1.   What are evolutionary process models? Discuss spiral model in detail. Compare it with incremental model and waterfall model. Also discuss unified process in brief.   **(12)**

OR

2.   Define Requirements Engineering and its various phases. How many types of requirements are there? Explain in brief what is requirements management.   **(12)**

SECTION - B

3.   Discuss various architectural styles in C&C view.   **(12)**

OR

4.   Define risk. What is risk management? Discuss various activities carried out during risk management. What is risk mitigation?
                                                              (12)

SECTION - C

5. What are structure charts? Discuss with the help of suitable examples. What is First-Level-Factoring? Explain with an example of an ATM. **(12)**

OR

6. Discuss logic/algorithm design and state modelling of classes with the help of suitable examples. **(12)**

SECTION - D

7. Explain the concepts of refactoring of code with the help of a suitable example. What are bad smells? Explain various types of bad smell in brief. **(12)**

OR

8. Write notes on the following:

(a) Object oriented metrics

(b) Use case oriented metrics. **(12)**

SECTION - E

9. Answer the following in brief:

(a) What is PDL? **(2)**

(b) Define software maintenance. **(1)**

(c) What is verification? **(1)**

(d) Differentiate between re-engineering and reverse engineering. **(2)**

(e) Differentiate between software architecture and software design. **(2)**

(f) What is requirements elicitation? **(2)**

(g) Define software process model. **(1)**

(h) What is a class? **(1)**